WHAT IS CLAIMED IS:

1. An X-ray imaging apparatus comprising:

X-ray generation means for emitting X rays;

an X-ray detector on which a grid selected from a plurality of different types of grids is removably mountable, wherein said X-ray detector receives the X-rays emitted from said X-ray generation means, and wherein said X-ray detector obtains an X-ray image;

said X-ray detector including an automatic exposure control (AEC) detector for detecting the quantity of X-rays emitted from said X-ray generation means and for outputting a signal based on the detected quantity; and

control means for controlling said X-ray generation means and said AEC detector,

wherein said control means controls said X-ray generation means based on the signal output from said AEC detector, and

wherein said control means controls said AEC detector using correction data to correct an exposure detection element forming a part of said AEC detector.

2. An X-ray imaging apparatus according to Claim 1,

wherein said correction data relates to which of said plurality of types of grids is mounted on said X-ray detector.

3. An X-ray imaging apparatus according to Claim 2, wherein the correction data relates to a state in which none of said plurality of different types of grids is mounted.

4. An X-ray imaging apparatus according to Claim 1, further comprising storing means,

wherein said control means stores the correction data in said storing means and wherein said control means selects the correction data according to whether one of said plurality of different types of grids is mounted, and which type of said plurality of types of grids is mounted, and at least one other condition affecting the grid.

5. An X-ray imaging apparatus according to Claim 4,

wherein said control means further comprises correction data calculation means and wherein said control means calculates the correction data based on the correction data stored in the storing means, in the case where no correction data corresponding to the at least one other condition is stored in the storing means.

6. An X-ray imaging apparatus according to Claim 1, wherein the correction data is gain-correction data and/or

dark-current correction data, wherein the gain correction data is obtained using X-rays with known intensity distribution and wherein the dark-current correction data is obtained in the case where no X-rays are emitted.

7. An X-ray imaging apparatus according to Claim 1, wherein said AEC detector further comprises a plurality of exposure detection elements and all of said exposure detection elements are integrated into said X-ray detector.

8. An X-ray imaging apparatus according to Claim 1, wherein said AEC detector further comprises a plurality of pixels and wherein each pixel is formed as a detector element that can be read in non-destructive manner.

9. An X-ray imaging apparatus according to Claim 1, wherein said AEC detector further comprises a plurality of pixels and wherein each pixel is formed as a thin film transistor (TFT)-detector element.

10. An X-ray imaging apparatus according to Claim 1, wherein said control means reads said signal output from said AEC detector in a cycle of 5 msec or less.

11. An X-ray imaging apparatus according to Claim 1,

wherein the AEC detector further comprises a plurality of pixels formed as stripes of detector elements provided so as to be substantially parallel to the orientation of stripes of said grid.

12. A method for controlling an X-ray imaging apparatus that has at least one automatic exposure control (AEC) pixel, including the steps of detecting in real-time part of an X-ray that is made incident via a subject, performing AEC based on a signal detected by the AEC pixel, and generating an X-ray image of the subject based on the X ray that is made incident via the subject, comprising:

calibrating the signal detected by the AEC pixel according to a grid state; and

performing AEC detection based on the calibrated detected signal.

13. Computer-executable process steps stored on a computer-readable medium, said computer-executable process steps for making a computer perform a method for controlling an X-ray imaging apparatus, said computer-executable process steps comprising process steps executable to perform a method according to Claim 12.

14. A computer-readable medium which stores computer-

executable process steps, the computer-executable process steps for making a computer perform a method for controlling an X-ray imaging apparatus, said computer-executable process steps comprising process steps executable to perform a method according to Claim 12.